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(FILE 'HOME' ENTERED AT 15:33:10 ON 11 JUN 2003)

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH,
USPATFULL, JAPIO' ENTERED AT 15:33:18 ON 11 JUN 2003

L1 10623 S POLYPHENOL (L) OXIDASE
L2 54 S L1 AND ADHESION (L) INHIBIT?
L3 31 S L2 AND BACTERIA
L4 31 S L2 AND BACTERIA
L5 6 S L4 AND ASPARAGINASE
L6 1 S L1 AND BIOFOUL?
L7 11 S L1 AND ADHESIN

Search Report

including updated search

Author Search

NPL, ESTN, West

=> s l4 and asparaginase
L5 6 L4 AND ASPARAGINASE

=> d l5 1-6 ibib abs

L5 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:507501 CAPLUS

DOCUMENT NUMBER: 135:97467

TITLE: Methods and compositions for **inhibiting**

adhesion by microorganisms using enzymes

INVENTOR(S): Doyle, Ron J.; Cowan, M. M.

PATENT ASSIGNEE(S): University of Louisville Research Foundation, Inc.,

USA; Board of Trustees of Miami University

SOURCE: PCT Int. Appl., 90 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049255	A2	20010712	WO 2000-US35532	20001229
WO 2001049255	A3	20020221		
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002009436	A1	20020124	US 2000-750857	20001229
EP 1242113	A2	20020925	EP 2000-986769	20001229
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 1999-173821P P 19991230

WO 2000-US35532 W 20001229

AB The present invention is directed generally to compns. and methods for enzymic redn. of adhesion by a microorganism to cells, tissues, extracellular matrix, teeth, and/or dental prostheses. The compns. of the invention include pharmaceutical compns. including implants and oral care compns., such as mouthwashes and toothpastes, contg. an enzyme that can reduce binding of a microbe to a cell, a tissue, or a surface. Suitable enzymes include a **polyphenol oxidase** and an **asparaginase**. These enzymes reduce the adhesion by a microorganism but do not kill them.

L5 ANSWER 2 OF 6 SCISEARCH COPYRIGHT 2003 THOMSON ISI

ACCESSION NUMBER: 2002:587036 SCISEARCH

THE GENUINE ARTICLE: 572MZ

TITLE: Effects of **asparaginase** and **polyphenol oxidase** on adhesive characteristics of microorganisms

AUTHOR: Kolganova T V (Reprint); Ermolaev A V; Doyle R J

CORPORATE SOURCE: Russian Univ Peoples Friendship, Dept Microbiol, Moscow, Russia; Univ Louisville, Dept Microbiol & Immunol, Med Ctr, Louisville, KY USA

COUNTRY OF AUTHOR: Russia; USA

SOURCE: BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE, (JAN 2002) Vol. 133, No. 1, pp. 58-61. Publisher: CONSULTANTS BUREAU, 233 SPRING ST, NEW YORK, NY 10013 USA.

ISSN: 0007-4888.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 9

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We studied the effects of **polyphenol oxidase** and **asparaginase** on microorganism adhesion to buccal epithelial cells.

These enzymes reduced adhesion of pathogenic microorganisms (uropathogenic and Escherichia coli, Salmonella enteritidis, Entamoeba spp., Influenza virus, Candida albicans, Streptococcus spp.) and had virtually no effect on adhesive characteristics of probiotic variants of Escherichia coli and Lactobacillus fermentum.

L5 ANSWER 3 OF 6 USPATFULL

ACCESSION NUMBER: 2003:99685 USPATFULL
TITLE: Targeted enzymes
INVENTOR(S): Chen, Yiyu, San Jose, CA, UNITED STATES
Day, Anthony G., San Francisco, CA, UNITED STATES
Estell, David A., San Mateo, CA, UNITED STATES
Murray, Christopher J., Soquel, CA, UNITED STATES
Power, Scott D., San Bruno, CA, UNITED STATES
Schellenberger, Volker, Palo Alto, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003068792	A1	20030410
APPLICATION INFO.:	US 2001-22073	A1	20011213 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-255774P	20001214 (60)
	US 2001-279609P	20010328 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	H. Thomas Anderton Jr., Esq., Genencor International, Inc., 925 Page Mill Road, Palo Alto, CA, 94304	
NUMBER OF CLAIMS:	37	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Page(s)	
LINE COUNT:	4310	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides targeted enzymes that bind to targets better than the corresponding pre-targeted enzymes bind the target under like conditions, methods of making targeted enzymes, methods of using targeted enzymes to treat diseases, and pharmaceutical compositions comprising targeted enzymes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 6 USPATFULL

ACCESSION NUMBER: 2002:340173 USPATFULL
TITLE: Method for meniscus coating with liquid carbon dioxide
INVENTOR(S): Carbonell, Ruben G., Raleigh, NC, United States
DeSimone, Joseph M., Chapel Hill, NC, United States
Novick, Brian J., Raleigh, NC, United States
PATENT ASSIGNEE(S): North Carolina State University, Raleigh, NC, United States (U.S. corporation)
The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6497921	B1	20021224
APPLICATION INFO.:	US 2000-589557		20000607 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1998-188053, filed on 6 Nov 1998, now patented, Pat. No. US 6083565		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Bareford, Katherine A.		
LEGAL REPRESENTATIVE:	Myers Bigel Sibley & Sajovec, P.A.		
NUMBER OF CLAIMS:	19		
EXEMPLARY CLAIM:	1		

NUMBER OF DRAWINGS: 9 Drawing Figure(s); 7 Drawing Page(s)

LINE COUNT: 784

AB A method of coating a substrate comprises immersing a surface portion of a substrate in a first phase comprising carbon dioxide and a coating component comprising a polymeric precursor; then withdrawing the substrate from the first phase into a distinct second phase so that the coating component is deposited on the surface portion; and then subjecting the substrate to conditions sufficient to polymerize the polymeric precursor and form a polymerized coating.

L5 ANSWER 5 OF 6 USPATFULL

ACCESSION NUMBER: 2002:16560 USPATFULL
TITLE: Methods and compositions for **inhibiting adhesion** by microorganisms

INVENTOR(S): Doyle, Ron J., Louisville, KY, UNITED STATES
Cowan, M. M., Cincinnati, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002009436	A1	20020124
APPLICATION INFO.:	US 2000-750857	A1	20001229 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-173821P	19991230 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903	

NUMBER OF CLAIMS: 50
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 2655

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed generally to compositions and methods for enzymatic reduction of adhesion by a microorganism to cells, tissues, extracellular matrix, teeth, and/or dental prostheses. The compositions of the invention include pharmaceutical compositions and oral care compositions containing an enzyme that can reduce binding of a microbe to a cell, a tissue, or a surface. Suitable enzymes include a **polyphenol oxidase** and an **asparaginase**.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 6 USPATFULL

ACCESSION NUMBER: 1999:113557 USPATFULL
TITLE: Methods of screening foods for nutraceuticals
INVENTOR(S): Ghai, Geetha, Murray Hill, NJ, United States
Boyd, Charles, New Brunswick, NJ, United States
Csizsar, Katalin, New Brunswick, NJ, United States
Ho, Chi-Tang, East Brunswick, NJ, United States
Rosen, Robert T., Pottersville, NJ, United States
PATENT ASSIGNEE(S): Rutgers, The State University of New Jersey, New Brunswick, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5955269		19990921
APPLICATION INFO.:	US 1996-670826		19960620 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Myers, Carla J.		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	43		

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 2189
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to an assay system for screening nutraceuticals, i.e., foods or food substances that occur naturally, or that are produced during processing which are capable of modulating in a subject the expression of one or more genes associated with a disease or undesirable physical condition. The nutraceuticals identified by the screening assays can be incorporated into compositions which may be administered to a subject to treat or prevent a disease or undesirable condition, or otherwise to improve the health of the subject. The invention further provides methods for modifying the amount of nutraceuticals in raw and processed foods or food substances.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L1 10623 S POLYPHENOL (L) OXIDASE
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L4 31 S L2 AND BACTERIA
L5 6 S L4 AND ASPARAGINASE

=> d 14 1-31 ibib abs

L4 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:507501 CAPLUS

DOCUMENT NUMBER: 135:97467

TITLE: Methods and compositions for inhibiting
adhesion by microorganisms using enzymes

INVENTOR(S): Doyle, Ron J.; Cowan, M. M.

PATENT ASSIGNEE(S): University of Louisville Research Foundation, Inc.,
USA; Board of Trustees of Miami University

SOURCE: PCT Int. Appl., 90 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049255	A2	20010712	WO 2000-US35532	20001229
WO 2001049255	A3	20020221		
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002009436	A1	20020124	US 2000-750857	20001229
EP 1242113	A2	20020925	EP 2000-986769	20001229
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 1999-173821P P 19991230
WO 2000-US35532 W 20001229

AB The present invention is directed generally to compns. and methods for
enzymic redn. of adhesion by a microorganism to cells, tissues,
extracellular matrix, teeth, and/or dental prostheses. The compns. of the
invention include pharmaceutical compns. including implants and oral care
compns., such as mouthwashes and toothpastes, contg. an enzyme that can
reduce binding of a microbe to a cell, a tissue, or a surface. Suitable
enzymes include a **polyphenol oxidase** and an
asparaginase. These enzymes reduce the adhesion by a microorganism but do
not kill them.

L4 ANSWER 2 OF 31 SCISEARCH COPYRIGHT 2003 THOMSON ISI

ACCESSION NUMBER: 2002:587036 SCISEARCH

THE GENUINE ARTICLE: 572M2

TITLE: Effects of asparaginase and **polyphenol
oxidase** on adhesive characteristics of
microorganisms

AUTHOR: Kolganova T V (Reprint); Ermolaev A V; Doyle R J
CORPORATE SOURCE: Russian Univ Peoples Friendship, Dept Microbiol, Moscow,
Russia; Univ Louisville, Dept Microbiol & Immunol, Med
Ctr, Louisville, KY USA

COUNTRY OF AUTHOR: Russia; USA

SOURCE: BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE, (JAN 2002)
Vol. 133, No. 1, pp. 58-61.

Publisher: CONSULTANTS BUREAU, 233 SPRING ST, NEW YORK, NY
10013 USA.

ISSN: 0007-4888.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 9

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We studied the effects of **polyphenol oxidase** and asparaginase on microorganism adhesion to buccal epithelial cells. These enzymes reduced adhesion of pathogenic microorganisms (uropathogenic and *Escherichia coli*, *Salmonella enteritidis*, *Entamoeba* spp., Influenza virus, *Candida albicans*, *Streptococcus* spp.) and had virtually no effect on adhesive characteristics of probiotic variants of *Escherichia coli* and *Lactobacillus fermentum*.

L4 ANSWER 3 OF 31 USPATFULL

ACCESSION NUMBER: 2003:152379 USPATFULL
TITLE: Novel therapeutic binding molecule complexes
INVENTOR(S): Virtanen, Jorma, Irvine, CA, UNITED STATES
Virtanen, Sinikka, Irvine, CA, UNITED STATES
PATENT ASSIGNEE(S): Burststein Technologies, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003104045	A1	20030605
APPLICATION INFO.:	US 2002-105211	A1	20020325 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 1999-407705, filed on 28 Sep 1999, GRANTED, Pat. No. US 6379699 Continuation of Ser. No. US 1996-627695, filed on 29 Mar 1996, GRANTED, Pat. No. US 5997861 Continuation of Ser. No. US 1995-424874, filed on 19 Apr 1995, GRANTED, Pat. No. US 5718915 Continuation of Ser. No. US 1994-332514, filed on 31 Oct 1994, ABANDONED		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	David J. Oldenkamp, Esq., Oppenheimer Wolff & Donnelly LLP, Suite 3800, 2029 Century Park East, Los Angeles, CA, 90067		
NUMBER OF CLAIMS:	17		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	27 Drawing Page(s)		
LINE COUNT:	2384		

AB A supramolecule has a first supramolecular component including a first effector molecule covalently joined to a first nucleic acid, and a second supramolecular component including a second effector molecule covalently joined to a second nucleic acid, wherein the second nucleic acid has a region of at least partial complementarity to the first nucleic acid, wherein the first nucleic acid is in a base pairing relationship with the second nucleic acid and the first or second effector molecules are proteins, polypeptides, lipids or sugars. The supramolecule may further have a third supramolecule component which includes a third effector molecule covalently joined to a third nucleic acid, wherein the third nucleic acid has a region of at least partial complementarity to the first nucleic acid or the second nucleic acid and wherein the third nucleic acid is in a base pairing relationship with the second nucleic acid or the first nucleic acid.

L4 ANSWER 4 OF 31 USPATFULL

ACCESSION NUMBER: 2003:99685 USPATFULL
TITLE: Targeted enzymes
INVENTOR(S): Chen, Yiyou, San Jose, CA, UNITED STATES
Day, Anthony G., San Francisco, CA, UNITED STATES
Estell, David A., San Mateo, CA, UNITED STATES
Murray, Christopher J., Soquel, CA, UNITED STATES

Power, Scott D., San Bruno, CA, UNITED STATES
Schellenberger, Volker, Palo Alto, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003068792	A1	20030410
APPLICATION INFO.:	US 2001-22073	A1	20011213 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-255774P	20001214 (60)
	US 2001-279609P	20010328 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	H. Thomas Anderton Jr., Esq., Genencor International, Inc., 925 Page Mill Road, Palo Alto, CA, 94304	
NUMBER OF CLAIMS:	37	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Page(s)	
LINE COUNT:	4310	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	The present invention provides targeted enzymes that bind to targets better than the corresponding pre-targeted enzymes bind the target under like conditions, methods of making targeted enzymes, methods of using targeted enzymes to treat diseases, and pharmaceutical compositions comprising targeted enzymes.	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 31 USPATFULL
ACCESSION NUMBER: 2003:95933 USPATFULL
TITLE: KVD solution for transplantable organs
INVENTOR(S): Van Dyke, Knox, 106 Morgan Dr., Morgantown, WV, United States 26505
Sacks, Meir S., 5446 Guarino Rd., Pittsburgh, PA, United States 15217

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6544726	B1	20030408
APPLICATION INFO.:	US 2000-565404		20000505 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-132633P	19990505 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Saucier, Sandra E.	
LEGAL REPRESENTATIVE:	Towner, Esq., Alan G., Pietragallo, Bosick & Gordon	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	380	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

AB The present invention is directed to a composition and method of preserving organs comprising exposing said organs to a preservation solution that includes at least an inhibitor or quencher of peroxynitrite. In its most easily formulated embodiment the present invention is a modified Wisconsin solution which includes the inhibitor or quencher as described herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 31 USPATFULL
ACCESSION NUMBER: 2002:340173 USPATFULL

TITLE: Method for meniscus coating with liquid carbon dioxide
INVENTOR(S): Carbonell, Ruben G., Raleigh, NC, United States
DeSimone, Joseph M., Chapel Hill, NC, United States
Novick, Brian J., Raleigh, NC, United States
PATENT ASSIGNEE(S): North Carolina State University, Raleigh, NC, United States (U.S. corporation)
The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6497921	B1	20021224
APPLICATION INFO.:	US 2000-589557		20000607 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1998-188053, filed on 6 Nov 1998, now patented, Pat. No. US 6083565		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Bareford, Katherine A.		
LEGAL REPRESENTATIVE:	Myers Bigel Sibley & Sajovec, P.A.		
NUMBER OF CLAIMS:	19		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	9 Drawing Figure(s); 7 Drawing Page(s)		
LINE COUNT:	784		

AB A method of coating a substrate comprises immersing a surface portion of a substrate in a first phase comprising carbon dioxide and a coating component comprising a polymeric precursor; then withdrawing the substrate from the first phase into a distinct second phase so that the coating component is deposited on the surface portion; and then subjecting the substrate to conditions sufficient to polymerize the polymeric precursor and form a polymerized coating.

L4 ANSWER 7 OF 31 USPATEFULL

ACCESSION NUMBER: 2002:235434 USPATEFULL
TITLE: Biosensors, reagents and diagnostic applications of directed evolution
INVENTOR(S): Minshull, Jeremy, Menlo Park, CA, UNITED STATES
Davis, S. Christopher, San Francisco, CA, UNITED STATES
Welch, Mark, Fremont, CA, UNITED STATES
Raillard, Sun Ai, Mountain View, CA, UNITED STATES
Vogel, Kurt, Palo Alto, CA, UNITED STATES
Krebbler, Claus, Mountain View, CA, UNITED STATES
PATENT ASSIGNEE(S): Maxygen, Inc., Redwood City, CA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002127623	A1	20020912
APPLICATION INFO.:	US 2001-920607	A1	20010731 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-222056P	20000731 (60)
	US 2000-244764P	20001031 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: LAW OFFICES OF JONATHAN ALAN QUINE, P O BOX 458, ALAMEDA, CA, 94501
NUMBER OF CLAIMS: 130
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 6877

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for sensing test stimuli using arrays of biopolymers are provided. Libraries of biopolymers, such nucleic acid variants, and expression products encoded by nucleic acid variants are provided.

Reusable library arrays, and methods for their use are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 31 USPATFULL

ACCESSION NUMBER: 2002:202315 USPATFULL
TITLE: Disposable treatment article having a responsive system
Roe, Donald C., West Chester, OH, United States
INVENTOR(S): Allen, Patrick J., Cincinnati, OH, United States
Ehrensperger, Bruno J., Frankfurt am Main, GERMANY,
FEDERAL REPUBLIC OF
Schmidt, Mattias, Idstein, GERMANY, FEDERAL REPUBLIC OF
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United
States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6433244	B1	20020813
APPLICATION INFO.:	US 1999-342785		19990629 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1998-107561, filed on 29 Jun 1998 Continuation-in-part of Ser. No. US 1998-106225, filed on 29 Jun 1998		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-90993P	19980629 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Weiss, John G.	
ASSISTANT EXAMINER:	Stephens, Jacqueline	
LEGAL REPRESENTATIVE:	Moore, Jeffrey R., Weirich, David M., Patel, Ken K.	
NUMBER OF CLAIMS:	34	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	31 Drawing Figure(s); 12 Drawing Page(s)	
LINE COUNT:	2051	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disposable articles for treating objects such as surfaces, devices, persons, contaminants, and the like or for treating substances disposed on, in, or in proximity to such objects having a responsive system. The responsive system may respond continuously or discontinuously. A continuous responsive system of the present invention further includes a feedback control loop. A discontinuous responsive system of the present invention may include either a feedback control loop or an open loop.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 31 USPATFULL

ACCESSION NUMBER: 2002:181713 USPATFULL
TITLE: Cocoa extract compounds and methods for making and
using the same
INVENTOR(S): Romanczyk, Jr., Leo J., Hackettstown, NJ, United States
PATENT ASSIGNEE(S): Mars Incorporated, McLean, VA, United States (U.S.
corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6423743	B1	20020723
APPLICATION INFO.:	US 2000-717833		20001121 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1997-831245, filed on 2 Apr 1997, now patented, Pat. No. US 6297273 Continuation-in-part of Ser. No. US 1996-631661, filed on 2 Apr 1996, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Solola, T. A.		

LEGAL REPRESENTATIVE: Kelley, Margaret B., Clifford Chance Rogers & Wells
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 246 Drawing Figure(s); 234 Drawing Page(s)
LINE COUNT: 4656

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed and claimed are cocoa extracts, compounds, combinations thereof and compositions containing the same, such as polyphenols or procyanidins, methods for preparing such extracts, compounds and compositions, as well as uses for them, especially a polymeric compound of the formula A.sub.n, wherein A is a monomer of the formula: ##STR1##

wherein

n is an integer from 2 to 18, such that there is at least one terminal monomeric unit A, and one or a plurality of additional monomeric units;

R is 3-(.alpha.)-OH, 3-(.beta.)-OH, 3-(.alpha.)-O-sugar, or 3-(.beta.)-O-sugar.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 31 USPATFULL

ACCESSION NUMBER: 2002:165204 USPATFULL

TITLE: Cocoa extract compounds and methods for making and using the same

INVENTOR(S): Romanczyk, Leo J., JR., Hackettstown, NJ, UNITED STATES
Hammerstone, John F., JR., Nazareth, PA, UNITED STATES
Buck, Margaret M., Morristown, NJ, UNITED STATES
Post, Laurie S., Great Meadows, NJ, UNITED STATES
Cipolla, Giovanni G., Alpha, NJ, UNITED STATES
McClelland, Craig A., East Stroudsburg, PA, UNITED STATES
Mundt, Jeff A., Hackettstown, NJ, UNITED STATES
Schmitz, Harold H., Branchburg, NJ, UNITED STATES
PATENT ASSIGNEE(S): Mars, Incorporated (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002086833	A1	20020704
APPLICATION INFO.:	US 2001-776649	A1	20010205 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1997-831245, filed on 2 Apr 1997, GRANTED, Pat. No. US 6297273 Continuation-in-part of Ser. No. US 1996-631661, filed on 2 Apr 1996, ABANDONED		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Clifford Chance Rogers & Wells LLP, 200 Park Avenue, New York, NY, 10166-0153		
NUMBER OF CLAIMS:	208		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	240 Drawing Page(s)		
LINE COUNT:	5797		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Polyphenol-containing compositions, for example cocoa procyanidin monomer and/or oligomer-containing compositions, and their use for inhibiting bacterial growth are disclosed. Compositions may be used for human and veterinary animal administration and may be, for example, in a form of a food, a dietary supplement, or a pharmaceutical.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 31 USPATFULL

ACCESSION NUMBER: 2002:122815 USPATFULL

TITLE: Diaper including feces modification agent

INVENTOR(S): Roe, Donald C., West Chester, OH, United States
 Ahr, Nicholas A., Cincinnati, OH, United States
 Bewick-Sonntag, Christopher P., Pescara, ITALY
 Schmidt, Mattias, Idstein, GERMANY, FEDERAL REPUBLIC OF
 Goldman, Stephen A., Pescara, ITALY
 Christison, John, Mississauga, CANADA
 Goulait, David Joseph Kenneth, West Chester, OH, United States

PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6395955	B1	20020528
APPLICATION INFO.:	US 1999-342395		19990629 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1998-107561, filed on 29 Jun 1998, now patented, Pat. No. US 6149636, issued on 21 Nov 2000 Continuation-in-part of Ser. No. US 1998-106225, filed on 29 Jun 1998, now patented, Pat. No. US 6186991, issued on 13 Feb 2001		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-91076P	19980629 (60)
	US 1998-90993P	19980629 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Weiss, John G.	
ASSISTANT EXAMINER:	Webb, Jamisue A	
LEGAL REPRESENTATIVE:	Hayden, Michael P., Weirich, David M., Patel, Ken K.	
NUMBER OF CLAIMS:	43	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	34 Drawing Figure(s); 19 Drawing Page(s)	
LINE COUNT:	3357	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An article to be fitted to a wearer including an agent which is available in an effective concentration to physically or chemically modify some or all of the fecal material or other bodily exudates deposited in the article. The modification of the feces may improve acceptance and/or retention of the exudates within the article to reduce the spreading of fecal material within the diaper and/or to reduce the tendency of the fecal material to adhere to the wearer's skin.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 31 USPATFULL

ACCESSION NUMBER: 2002:95381 USPATFULL

TITLE: Liposome having attached target-binding moiety and arteriosclerotic plaque interacting moiety

INVENTOR(S): Virtanen, Jorma, Irvine, CA, United States
 Virtanen, Sinikka, Irvine, CA, United States

PATENT ASSIGNEE(S): Burstein Technologies, Inc., Irvine, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6379699	B1	20020430
APPLICATION INFO.:	US 1999-407705		19990928 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1996-627695, filed on 29 Mar 1996, now patented, Pat. No. US 5997861 Continuation-in-part of Ser. No. US 1995-424874, filed on 19 Apr 1995, now patented, Pat. No. US 5718915 Continuation-in-part of Ser. No. US 1994-332514, filed on 31 Oct 1994, now abandoned		
DOCUMENT TYPE:	Utility		

FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Naff, David M.
LEGAL REPRESENTATIVE: Oppenheimer Wolff & Donnelly LLP
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 28 Drawing Figure(s); 21 Drawing Page(s)
LINE COUNT: 2299
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes are prepared containing two or more different effector molecules joined to each other by a joining component. One effector molecule is a binding molecule such as an antibody or Fc receptor that binds to a molecular target such as a virus or antibody at a site of infection or tumor, and another effector molecule is a therapeutic molecule such as an enzyme or drug. The joining component may be a liposome, protein or an organic polymer (including a dendrimer type polymer), and may be of sufficient length and/or flexibility to permit the therapeutic molecule to physically interact with the target at the same time as the binding molecule. Supramolecules are formed containing at least two supramolecular component molecules that contain an effector molecule and a nucleic acid chain. A nucleic acid chain on a component molecule is complementary to a nucleic acid chain on another component molecule to enable binding of the component molecules of the supramolecule by the formation of double stranded nucleic acid chains between complementary chains. A targetable antiviral supramolecule is prepared containing spectrin as the joining component. The binding molecule can be an antibody specific for an antigen on a viral particle and the therapeutic molecule can be an enzyme capable of destroying infectivity of the virus by hydrolysis of viral coat protein or viral lipid. A targeting moiety that binds to low density lipoprotein or atherosclerotic plaque and a therapeutic moiety that interacts with atherosclerotic plaque are attached to a liposome for treating atherosclerosis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 31 USPATFULL

ACCESSION NUMBER: 2002:85538 USPATFULL
TITLE: Compositions for raising uric acid levels and methods of using same
INVENTOR(S): Sacks, Meir S., Pittsburgh, PA, UNITED STATES
Van Dyke, Knox, Morgantown, WV, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002045580	A1	20020418
APPLICATION INFO.:	US 2001-981222	A1	20011016 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-449037, filed on 24 Nov 1999, UNKNOWN		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Alan G. Towner, Pietragallo, Bosick & Gordon, One Oxford Centre, 38th Floor, 301 Grant Street, Pittsburgh, PA, 15219		
NUMBER OF CLAIMS:	33		
EXEMPLARY CLAIM:	1		
LINE COUNT:	703		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for the treatment of uric acid deficiency are disclosed. The compositions generally comprise either a precursor or derivative of uric acid, which, when administered to a patient, will result in a raising of the uric acid levels in that patient. The compositions can optionally comprise one or more additional active ingredients such as antioxidants, glutathione precursors, or inhibitors of NO synthase or homocysteine. Methods for raising uric acid levels in a patient are also disclosed. These methods are useful for in the treatment of various

illnesses, such as cancer, infectious disease, Alzheimer disease and neurodegenerative diseases. Use of improved solutions comprising the present compositions in organ preservation is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 31 USPATFULL

ACCESSION NUMBER: 2002:66608 USPATFULL
TITLE: Compositions for controlling bacterial colonization
INVENTOR(S): Budny, John A., Westlake Village, CA, UNITED STATES
Budny, Matthew J., Westlake Village, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002037259	A1	20020328
APPLICATION INFO.:	US 2000-735281	A1	20001211 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-249674, filed on 12 Feb 1999, GRANTED, Pat. No. US 6159447 Continuation-in-part of Ser. No. US 1997-951393, filed on 16 Oct 1997, GRANTED, Pat. No. US 5871714		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	COLIN P ABRAHAMS, 5850 CANOGA AVENUE, SUITE 400, WOODLAND HILLS, CA, 91367		
NUMBER OF CLAIMS:	47		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Page(s)		
LINE COUNT:	1282		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition for controlling bacterial growth/colonization is provided. The composition comprises a selected enzyme, a selected anchor molecule coupled to the enzyme to form an enzyme-anchor complex, with the anchor being capable of attaching to a substrate proximal to a bacterial colony. The attachment to the substrate permits prolonged retention time of the enzyme-anchor complex where the bacterial colony is present to increase the effectiveness of the complex. The invention is also for a method of controlling colonization of bacterial plaque in the oral cavity, as well as a method of forming a composition for controlling the proliferation of bacterial colonies in the oral cavity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 31 USPATFULL

ACCESSION NUMBER: 2002:60923 USPATFULL
TITLE: Single-molecule selection methods and compositions therefrom
INVENTOR(S): Cubicciotti, Roger S., Montclair, NJ, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002034757	A1	20020321
APPLICATION INFO.:	US 2001-907385	A1	20010717 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1998-81930, filed on 20 May 1998, GRANTED, Pat. No. US 6287765		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	LICATA & TYRRELL P.C., 66 E. MAIN STREET, MARLTON, NJ, 08053		
NUMBER OF CLAIMS:	129		
EXEMPLARY CLAIM:	1		
LINE COUNT:	15716		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Single-molecule selection methods are provided for identifying target-binding molecules from diverse sequence and shape libraries. Complexes and imprints of selected target-binding molecules are also

provided. The subject selection methods are used to identify oligonucleotide and nonnucleotide molecules with desirable properties for use in pharmaceuticals, drug discovery, drug delivery, diagnostics, medical devices, cosmetics, agriculture, environmental remediation, smart materials, packaging, microelectronics and nanofabrication. Single oligonucleotide molecules with desirable binding properties are selected from diverse sequence libraries and identified by amplification and sequencing. Alternatively, selected oligonucleotide molecules are identified by sequencing without amplification. Nonnucleotide molecules with desirable properties are identified by single-molecule selection from libraries of conjugated molecules or nucleotide-encoded nonnucleotide molecules. Alternatively, target-specific nonnucleotide molecules are prepared by imprinting selected oligonucleotide molecules into nonnucleotide molecular media. Complexes and imprints of molecules identified by single-molecule selection are shown to have broad utility as drugs, prodrugs, drug delivery systems, willfully reversible cosmetics, diagnostic reagents, sensors, transducers, actuators, adhesives, adherents and novel multimolecular devices.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 31 USPATFULL

ACCESSION NUMBER: 2002:16560 USPATFULL
TITLE: Methods and compositions for **inhibiting adhesion** by microorganisms
INVENTOR(S): Doyle, Ron J., Louisville, KY, UNITED STATES
Cowan, M. M., Cincinnati, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002009436	A1	20020124
APPLICATION INFO.:	US 2000-750857	A1	20001229 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-173821P	19991230 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903	
NUMBER OF CLAIMS:	50	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Page(s)	
LINE COUNT:	2655	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed generally to compositions and methods for enzymatic reduction of adhesion by a microorganism to cells, tissues, extracellular matrix, teeth, and/or dental prostheses. The compositions of the invention include pharmaceutical compositions and oral care compositions containing an enzyme that can reduce binding of a microbe to a cell, a tissue, or a surface. Suitable enzymes include a **polyphenol oxidase** and an asparaginase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 31 USPATFULL

ACCESSION NUMBER: 2001:168156 USPATFULL
TITLE: Use of cocoa solids having high cocoa polyphenol content in tabletting compositions and capsule filling compositions
INVENTOR(S): Romanczyk, Jr., Leo J., Hackettstown, NJ, United States
PATENT ASSIGNEE(S): Mars, Inc., McLean, VA, United States (U.S. corporation)

NUMBER	KIND	DATE
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PATENT INFORMATION:	US 6297273	B1	20011002
APPLICATION INFO.:	US 1997-831245		19970402 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Tsang, Cecilia		
ASSISTANT EXAMINER:	Solola, Taofiq A.		
LEGAL REPRESENTATIVE:	Kelley, Margaret B.	Clifford Chance Rogers & Wells, LLP	
NUMBER OF CLAIMS:	21		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	237	Drawing Figure(s);	221 Drawing Page(s)
LINE COUNT:	4861		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed and claimed are cocoa extracts, compounds, combinations thereof and compositions containing the same, such as polyphenols or procyanidins, methods for preparing such extracts, compounds and compositions, as well as uses for them, especially a polymeric compound of the formula A.sub.n, wherein A is a monomer of the formula: ##STR1##

wherein n is an integer from 2 to 18, such that there is at least one terminal monomeric unit A, and one or a plurality of additional monomeric units;

R is 3-(.alpha.)-OH, 3-(.beta.)-OH, 3-(.alpha.)-O-sugar, or 3-(.beta.)-O-sugar;

bonding between adjacent monomers takes place at positions 4, 6 or 8;

a bond of an additional monomeric unit in position 4 has alpha or beta stereochemistry;

X, Y and Z are selected from the group consisting of monomeric unit A, hydrogen, and a sugar, with the provisos that as to the at least one terminal monomeric unit, bonding of the additional monomeric unit thereto (the bonding of the additional monomeric unit adjacent to the terminal monomeric unit) is at position 4 and optionally Y=Z=hydrogen;

the sugar is optionally substituted with a phenolic moiety, at any position on the sugar, for instance via an ester bond, and

pharmaceutically acceptable salts or derivatives thereof (including oxidation products).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 31 USPATFULL
 ACCESSION NUMBER: 2001:152673 USPATFULL
 TITLE: Methods for detecting and identifying single molecules
 INVENTOR(S): Cubicciotti, Roger S., Montclair, NJ, United States
 PATENT ASSIGNEE(S): Molecular Machines, Inc., Montclair, NJ, United States
 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6287765	B1	20010911
APPLICATION INFO.:	US 1998-81930		19980520 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Fredman, Jeffrey		
LEGAL REPRESENTATIVE:	Licata & Tyrrell P.C.		
NUMBER OF CLAIMS:	27		
EXEMPLARY CLAIM:	1		
LINE COUNT:	15456		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Multimolecular devices and drug delivery systems prepared from synthetic

heteropolymers, heteropolymeric discrete structures, multivalent heteropolymeric hybrid structures, aptameric multimolecular devices, multivalent imprints, tethered specific recognition devices, paired specific recognition devices, nonaptameric multimolecular devices and immobilized multimolecular structures are provided, including molecular adsorbents and multimolecular adherents, adhesives, transducers, switches, sensors and delivery systems. Methods for selecting single synthetic nucleotides, shape-specific probes and specifically attractive surfaces for use in these multimolecular devices are also provided. In addition, paired nucleotide-nonnucleotide mapping libraries for transposition of selected populations of selected nonoligonucleotide molecules into selected populations of replicatable nucleotide sequences are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 31 USPATFULL

ACCESSION NUMBER: 2001:109880 USPATFULL

TITLE: Process for macromolecularizing phenolic compounds etc. and use thereof

INVENTOR(S): Echigo, Takashi, Chiba, Japan
Ohno, Ritsuko, Tokyo, Japan

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001007762	A1	20010712
	US 6537546	B2	20030325
APPLICATION INFO.:	US 2000-742217	A1	20001222 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-202041, filed on 7 Dec 1998, GRANTED, Pat. No. US 6190891 A 371 of International Ser. No. WO 1997-JP1694, filed on 20 May 1997, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-144200	19960606
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037-3213	
NUMBER OF CLAIMS:	23	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1180	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for macromolecularizing phenolic compounds or aromatic amine compounds by the action of a catalyst comprising an enzyme having a polyphenol oxidizing activity in the alkali region; applications of the compounds obtained by the above process to thickeners, stabilizers, coagulants, emulsifiers, dispersants, water retainers, antioxidants, adhesives, concrete admixtures, dyes, coating materials, petroleum recovering agent, soil conditioner, a blow-applied seed bearing surface soil stabilizer, deodorants, smell eliminators, agricultural chemical spreaders, feeding stuff binders, bactericides, antimicrobial agents, viral infection inhibitors, bioadhesion preventives, biotic repellents, insecticides, poultices, ink bases or wood treating agents; and method of waste water disposal, a method of deoxygenation and a method of treating wood, concrete or soil in which use is made of the above reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 20 OF 31 USPATFULL

ACCESSION NUMBER: 2001:25656 USPATFULL

TITLE: Process for producing high-molecular-weight phenolic compounds with myrothecium

INVENTOR(S): Echigo, Takashi, Chiba, Japan
Ohno, Ritsuko, Tokyo, Japan
PATENT ASSIGNEE(S): Showa Denko K.K., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6190891	BI	20010220
	WO 9746694		19971211
APPLICATION INFO.:	US 1998-202041		19981207 (9)
	WO 1997-JP1694		19970520
			19981207 PCT 371 date
			19981207 PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-144200	19960606
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Marx, Irene	
LEGAL REPRESENTATIVE:	Sughrue, Mion, Zinn, Macpeak & Seas, PLLC	
NUMBER OF CLAIMS:	7	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1064	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for macromolecularizing phenolic compounds or aromatic amine compounds by the action of a catalyst comprising an enzyme having a polyphenol oxidizing activity in the alkali region; applications of the compounds obtained by the above process to thickeners, stabilizers, coagulants, emulsifiers, dispersants, water retainers, antioxidants, adhesives, concrete admixtures, dyes, coating materials, petroleum recovering agent, soil conditioner, a blow-applied seed bearing surface soil stabilizer, deodorants, smell eliminators, agricultural chemical spreaders, feeding stuff binders, bactericides, antimicrobial agents, viral infection inhibitors, bioadhesion preventives, biotic repellents, insecticides, poultices, ink bases or wood treating agents; and method of waste water disposal, a method of deoxygenation and a method of treating wood, concrete or soil in which use is made of the above reaction.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 21 OF 31 USPATFULL
ACCESSION NUMBER: 2000:167495 USPATFULL
TITLE: Compositions for controlling bacterial colonization
INVENTOR(S): Budny, John A., Westlake Village, CA, United States
Budny, Matthew J., Westlake Village, CA, United States
PATENT ASSIGNEE(S): PharmaCal Biotechnologies, LLC, Westlake Village, CA,
United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6159447		20001212
APPLICATION INFO.:	US 1999-249674		19990212 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1997-951393, filed on 16 Oct 1997, now patented, Pat. No. US 5871714, issued on 16 Feb 1999		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Weddington, Kevin E.		
LEGAL REPRESENTATIVE:	Abrahams, Colin P.		
NUMBER OF CLAIMS:	47		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	1272		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition for controlling bacterial growth/colonization is provided. The composition comprises a selected enzyme, a selected anchor molecule coupled to the enzyme to form an enzyme-anchor complex, with the anchor being capable of attaching to a substrate proximal to a bacterial colony. The attachment to the substrate permits prolonged retention time of the enzyme-anchor complex where the bacterial colony is present to increase the effectiveness of the complex. The invention is also for a method of controlling colonization of bacterial plaque in the oral cavity, as well as a method of forming a composition for controlling the proliferation of bacterial colonies in the oral cavity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 22 OF 31 USPATFULL

ACCESSION NUMBER: 1999:159816 USPATFULL
TITLE: Anti-fouling methods using enzyme coatings
INVENTOR(S): Bonaventura, Celia, Beaufort, NC, United States
Bonaventura, Joseph, Beaufort, NC, United States
Hooper, Irving R., Beaufort, NC, United States
PATENT ASSIGNEE(S): Duke University, Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5998200		19991207
APPLICATION INFO.:	US 1991-683130		19910410 (7)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1990-464699, filed on 16 Jan 1990, now abandoned which is a continuation of Ser. No. US 1985-744547, filed on 14 Jun 1985, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Beisner, William H.		
LEGAL REPRESENTATIVE:	Obolon, Spivak, McClelland, Maier & Neustadt, P.C.		
NUMBER OF CLAIMS:	14		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	1857		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for preventing fouling of an aquatic apparatus by an aquatic organism which comprises affixing a biologically active chemical to a surface intended for use in contact with an aquatic environment containing the organism, wherein the chemical is an enzyme, repellent, chelating agent, enzyme inhibitor, or non-metallic toxicant capable of hindering the attachment of the organism to the surface while affixed to the surface, is disclosed along with improved apparatuses which are produced using the method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 23 OF 31 USPATFULL

ACCESSION NUMBER: 1999:159478 USPATFULL
TITLE: Antiviral supramolecules containing target-binding molecules and therapeutic molecules bound to spectrin
INVENTOR(S): Virtanen, Jorma, Irvine, CA, United States
Virtanen, Sinikka, Irvine, CA, United States
PATENT ASSIGNEE(S): Burstein Laboratories, Inc., Irvine, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5997861		19991207
APPLICATION INFO.:	US 1996-627695		19960329 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1995-424874, filed on 19 Apr 1995, now patented, Pat. No. US 5718915 which is a continuation-in-part of Ser. No. US 1994-332514,		

filed on 31 Oct 1994, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.
LEGAL REPRESENTATIVE: Halluin, Albert P. Howrey & Simon
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 28 Drawing Figure(s); 24 Drawing Page(s)
LINE COUNT: 2390

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes are prepared containing two or more different effector molecules joined to each other by a joining component. One effector molecule is a binding molecule such as an antibody or Fc receptor that binds to a molecular target such as a virus or antibody at a site of infection or tumor, and another effector molecule is a therapeutic molecule such as an enzyme or drug. The joining component may be a liposome, protein or an organic polymer (including a dendrimer type polymer), and may be of sufficient length and/or flexibility to permit the therapeutic molecule to physically interact with the target at the same time as the binding molecule. Supramolecules are formed containing at least two supramolecular component molecules that contain an effector molecule and a nucleic acid chain. A nucleic acid chain on a component molecule is complementary to a nucleic acid chain on another component molecule to enable binding of the component molecules of the supramolecule by the formation of double stranded nucleic acid chains between complementary chains. A targetable antiviral supramolecule is prepared containing spectrin as the joining component. The binding molecule can be an antibody specific for an antigen on a viral particle and the therapeutic molecule can be an enzyme capable of destroying infectivity of the virus by hydrolysis of viral coat protein or viral lipid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 24 OF 31 USPATFULL

ACCESSION NUMBER: 1999:113557 USPATFULL
TITLE: Methods of screening foods for nutraceuticals
INVENTOR(S): Ghai, Geetha, Murray Hill, NJ, United States
Boyd, Charles, New Brunswick, NJ, United States
Csizsar, Katalin, New Brunswick, NJ, United States
Ho, Chi-Tang, East Brunswick, NJ, United States
Rosen, Robert T., Pottersville, NJ, United States
PATENT ASSIGNEE(S): Rutgers, The State University of New Jersey, New Brunswick, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5955269		19990921
APPLICATION INFO.:	US 1996-670826		19960620 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Myers, Carla J.		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	43		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Page(s)		
LINE COUNT:	2189		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to an assay system for screening nutraceuticals, i.e., foods or food substances that occur naturally, or that are produced during processing which are capable of modulating in a subject the expression of one or more genes associated with a disease or undesirable physical condition. The nutraceuticals identified by the screening assays can be incorporated into compositions which may be administered to a subject to treat or prevent a disease or undesirable

condition, or otherwise to improve the health of the subject. The invention further provides methods for modifying the amount of nutraceuticals in raw and processed foods or food substances.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 25 OF 31 USPATFULL

ACCESSION NUMBER: 1999:78389 USPATFULL
TITLE: Preparation and preservation of fresh, vitaminized, flavored and unflavored cut apple pieces
INVENTOR(S): Powrie, William Duncan, North Vancouver, Canada
Wu, Chiu Hui, Vancouver, Canada
PATENT ASSIGNEE(S): The University of British Columbia, Vancouver, Canada
(non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5922382		19990713
APPLICATION INFO.:	US 1996-745944		19961108 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	CA 1995-2162425	19951108
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Stucker, Jeffrey	
ASSISTANT EXAMINER:	Bui, Phuong T	
LEGAL REPRESENTATIVE:	Oyen Wiggs Green & Mutala	
NUMBER OF CLAIMS:	10	
EXEMPLARY CLAIM:	1	
LINE COUNT:	958	

AB This invention relates to a novel method of preserving fresh cut fruit for a prolonged period of time. More particularly, this invention is directed to a novel method of preparing and preserving fresh, vitaminized flavored or unflavored cut apple pieces to be stored in containers for extended periods of time of up to 6 weeks at refrigerated temperatures with the retention of acceptable naturally-occurring and adjunctive flavors, crisp texture and original whiteness or yellowness, being free of enzymatic browning. A method of preserving fresh apple pieces comprising: (a) sanitizing the surfaces of whole apples with a suitable sanitization agent; (b) coring and cutting the peeled or unpeeled apples into pieces; (c) immersing the apple pieces in an acid solution containing between about 5 to about 15% weight ascorbic acid; (d) removing excess solution from the surfaces of the apple pieces; (e) depositing a flavorant on the surfaces of the apple pieces in a container or placing previously-flavored apple pieces in a container; and (f) quick-chilling the apple pieces and storing the container of apple pieces at a temperature between about 0.degree. C. and about 10.degree. C.

L4 ANSWER 26 OF 31 USPATFULL

ACCESSION NUMBER: 1998:153855 USPATFULL
TITLE: Marine mela gene
INVENTOR(S): Weiner, Ronald M., Adelphi, MD, United States
Fuqua, Jr., William Claiborne, San Antonio, TX, United States
PATENT ASSIGNEE(S): University of Maryland, College Park, MD, United States
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5846531		19981208
APPLICATION INFO.:	US 1995-476254		19950607 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1993-148945, filed		

on 8 Nov 1993, now patented, Pat. No. US 5474933 which is a continuation-in-part of Ser. No. US 1992-974837, filed on 10 Nov 1992, now abandoned which is a continuation of Ser. No. US 1990-496804, filed on 21 Mar 1990, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Patterson, Jr., Charles L.
LEGAL REPRESENTATIVE: Nikaido Marmelstein Murray & Oram LLP
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 35 Drawing Figure(s); 23 Drawing Page(s)
LINE COUNT: 2865

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides the isolated genes encoding marine mela from the genus *Shewanella*, especially from the species *S. colwelliana*, and the Mela encoded thereby in homogeneous form. Further, the invention provides antibodies to marine Mela as well as methods of using the Mela to induce oyster larval settlement. Moreover, these marine mela genes are also useful as selectable markers for genetic engineering.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 27 OF 31 USPATFULL

ACCESSION NUMBER: 1998:17090 USPATFULL
TITLE: Antiviral liposome having coupled target-binding moiety and hydrolytic enzyme
INVENTOR(S): Virtanen, Jorma, Irvine, CA, United States
Virtanen, Sinikka, Irvine, CA, United States
PATENT ASSIGNEE(S): Burstein Laboratories, Inc., San Juan Capistrano, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5718915		19980217
APPLICATION INFO.:	US 1995-424874		19950419 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1994-332514, filed on 31 Oct 1994		

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 28 Drawing Figure(s); 24 Drawing Page(s)
LINE COUNT: 2111

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes are prepared containing two or more different effector molecules joined to each other by a joining component. At least one of the effector molecules can bind to a target molecule and at least one of the other effector molecules has therapeutic properties. The joining component can be liposomes, proteins and organic polymers including dendrimer polymers, and can be of sufficient length and/or flexibility to permit the therapeutic effector molecule to interact with a target at the same time as the binding molecules. An antiviral liposome is prepared by coupling to a liposome outer surface a hydrolytic enzyme capable of digesting a viral component and a target-binding moiety which may be a polypeptide, glycoprotein or glycoprotein fragment having specificity for viruses such as HIV-1, influenza virus and hepatitis virus. The hydrolytic enzyme may be a glycosidase, phospholipase, lipase, cholesterol esterase, nuclease or protease. A second hydrolytic enzyme and target-binding moiety may also be present, and albumin may be coupled to the liposome surface. Within the liposome may be an internal hydrolytic enzyme capable of digesting a viral component.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 28 OF 31 USPATFULL

ACCESSION NUMBER: 95:110382 USPATFULL
TITLE: Marine mela gene
INVENTOR(S): Weiner, Ronald M., Adelphi, MD, United States
Fuqua, Jr., William C., Norfolk, VA, United States
PATENT ASSIGNEE(S): The University of Maryland, College Park, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5474933		19951212
APPLICATION INFO.:	US 1993-148945		19931108 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1992-974837, filed on 10 Nov 1992, now abandoned which is a continuation of Ser. No. US 1990-496804, filed on 21 Mar 1990, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Furman, Keith C.		
ASSISTANT EXAMINER:	Kim, Hyosuk		
LEGAL REPRESENTATIVE:	Burns, Doane, Swecker & Mathis		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	34 Drawing Figure(s); 24 Drawing Page(s)		
LINE COUNT:	2293		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides the isolated genes encoding marine mela from the genus *Shewanella*, especially from the species *S. colwelliana*, and the mela encoded thereby in homogeneous form. Further, the invention provides antibodies to marine mela as well as methods of using the mela to induce oyster larval settlement. Moreover, these marine mela genes are also useful as selectable markers for genetic engineering.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 29 OF 31 USPATFULL

ACCESSION NUMBER: 90:83580 USPATFULL
TITLE: Analytical element and the analytical method using the element
INVENTOR(S): Ito, Tsukasa, Musashino, Japan
Kawakatsu, Satoshi, Hachioji, Japan
Onishi, Akira, Hino, Japan
Takekoshi, Masayo, Sagamihara, Japan
PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4966856		19901030
APPLICATION INFO.:	US 1987-110096		19871015 (7)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1986-874504, filed on 16 Jun 1986, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1985-131955	19850619
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Marcus, Michael S.	
ASSISTANT EXAMINER:	Johnston, Jill	
LEGAL REPRESENTATIVE:	Frishauf, Holtz, Goodman & Woodward	
NUMBER OF CLAIMS:	18	
EXEMPLARY CLAIM:	1,18	

NUMBER OF DRAWINGS: 7 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT: 1389

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An analytical element and method using the element for measuring a specific component in a fluid sample such as blood, serum, plasma, urine, sweat etc. The fluid sample is applied on the element with a labeled-material formed by binding the specific component or the analogue of it with a labeling material causing a signal. The element comprises a reaction layer and an absorption layer. The reaction layer contains a material which is capable of specifically binding with the component to be measured and the absorption layer contains a material which capable of binding with the labeled material and decreasing a signal caused by the labeling material. A strength of the signal caused labeled-material in the reaction layer is determined to measure the specific component.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 30 OF 31 USPATFULL

ACCESSION NUMBER: 84:31701 USPATFULL

TITLE: Integral multi-layered element containing glucose oxidase for determining glucose

INVENTOR(S): Kitajima, Masao, Saitama, Japan
Arai, Fuminori, Saitama, Japan
Katsuyama, Harumi, Saitama, Japan

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Saitama, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4452887		19840605
APPLICATION INFO.:	US 1982-389344		19820617 (6)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1981-93631	19810617
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Marantz, Sidney	
LEGAL REPRESENTATIVE:	Sughrue, Mion, Zinn, Macpeak and Seas	
NUMBER OF CLAIMS:	4	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	8 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	654	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In a dry-type multilayer liquid analysis material for glucose determination composed of a transparent water-impermeable support having formed thereon in sequence at least a reagent layer containing a reactive component forming a detectable material by the action of hydrogen peroxide, a non-porous light-shielding layer, and a porous spreading layer, the coloring efficiency for colorimetry using the liquid analysis material is improved by incorporating a glucose oxidase enzyme in at least one layer disposed above the reagent layer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 31 OF 31 USPATFULL

ACCESSION NUMBER: 76:53004 USPATFULL

TITLE: Integral element for the analysis of cholesterol

INVENTOR(S): Goodhue, Charles T., Rochester, NY, United States
Risley, Hugh A., Rochester, NY, United States
Snoke, Roy E., Rochester, NY, United States
Underwood, Gary M., Rochester, NY, United States

PATENT ASSIGNEE(S): Eastman Kodak Company, Rochester, NY, United States
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3983005		19760928
APPLICATION INFO.:	US 1975-565897		19750407 (5)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1974-454621, filed on 25 Mar 1974, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Monacell, A. Louis		
ASSISTANT EXAMINER:	Fan, C. A.		
LEGAL REPRESENTATIVE:	Girard, Arthur L.		
NUMBER OF CLAIMS:	67		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	1256		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An integral analytical element for analysis of liquids for their cholesterol content is disclosed. The element is of the type which comprises at least two superposed layers including a spreading layer and a reagent layer in fluid contact and, optionally, a support. Cholesterol oxidase and a composition for the hydrolysis of cholesterol esters comprising lipase having cholesterol esterase activity and protease are included in the element such that cholesterol esters contained in a sample applied to the spreading layer are saponified to free cholesterol and free cholesterol is decomposed in the presence of cholesterol oxidase to produce a detectable change related to the total cholesterol content of the sample.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d hist

(FILE 'HOME' ENTERED AT 15:33:10 ON 11 JUN 2003)

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH, USPATFULL, JAPIO' ENTERED AT 15:33:18 ON 11 JUN 2003

L1 10623 S POLYPHENOL (L) OXIDASE
 L2 54 S L1 AND ADHESION (L) INHIBIT?
 L3 31 S L2 AND BACTERIA
 L4 31 S L2 AND BACTERIA
 L5 6 S L4 AND ASPARAGINASE

=> s 11 and biofoul?

L6 1 L1 AND BIOFOUL?

=> d 16 abs

L6 ANSWER 1 OF 1 USPATFULL

AB The present invention is directed generally to compositions and methods for enzymatic reduction of adhesion by a microorganism to cells, tissues, extracellular matrix, teeth, and/or dental prostheses. The compositions of the invention include pharmaceutical compositions and oral care compositions containing an enzyme that can reduce binding of a microbe to a cell, a tissue, or a surface. Suitable enzymes include a **polyphenol oxidase** and an asparaginase.

Approved

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 16 ibib

L6 ANSWER 1 OF 1 USPATFULL

ACCESSION NUMBER: 2002:16560 USPATFULL

TITLE: Methods and compositions for inhibiting adhesion by microorganisms
INVENTOR(S): Doyle, Ron J., Louisville, KY, UNITED STATES
Cowan, M. M., Cincinnati, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002009436	A1	20020124
APPLICATION INFO.:	US 2000-750857	A1	20001229 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-173821P	19991230 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903	
NUMBER OF CLAIMS:	50	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Page(s)	
LINE COUNT:	2655	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

=> s 11 and adhesin
L7 11 L1 AND ADHESIN

=> d 17 ibib abs 1-11

L7 ANSWER 1 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:176306 BIOSIS
DOCUMENT NUMBER: PREV200200176306
TITLE: Flow cytometry analysis of Streptococcus pyogenes adhesion to host epithelial cells.
AUTHOR(S): Sethman, C. R. (1); Houk, S. (1); Doyle, R. J.; Cowan, M. M. (1)
CORPORATE SOURCE: (1) Miami University, Oxford, OH USA
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (2001) Vol. 101, pp. 47.
<http://www.asmsusa.org/mtgsrc/generalmeeting.htm>. print.
Meeting Info.: 101st General Meeting of the American Society for Microbiology Orlando, FL, USA May 20-24, 2001
ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

AB The precise roles of various surface molecules in the attachment of *S. pyogenes* are currently unclear. Our laboratory has developed an in-vitro flow cytometry assay that allows for the analysis of the kinetics of *S. pyogenes* adhesion to epithelial cells. We obtained dose- and time-dependent adhesion isotherms with both buccal epithelial cells (BECs) and HEp-2 cells as substrata. Although binding equilibrium is eventually reached, saturation of binding sites is not achieved within a wide range of experimental conditions. This indicates a high degree of non-specific attachment. Flow cytometry histograms of epithelial cells with adherent bacteria revealed non-Gaussian distributions of cells, displaying a distinct minority of cells bearing significantly more bacteria than the average epithelial cell. Kinetic desorption assays point to two populations of bacteria with respect to binding affinity. We suggest that the subpopulations of cells represent the influence of distinct bacterial adhesion mechanisms (often referred to as specific and nonspecific) and propose to use this methodology to assign roles to particular surface molecules/characteristics during distinct phases of adhesion. As an adjunct to this approach we investigated the effects of the enzyme **polyphenol oxidase** (PPO) on proteinaceous **adhesins** on both host cell and bacterium. Stationary phase *S.*

pyogenes or host cells were treated with different concentrations of PPO and assayed for adhesion using flow cytometry. In both cases there was a concentration-dependent decrease in adhesion. The two subpopulations of epithelial cells were still present, indicating a) that protein components on both partners function in adhesion, and b) that non-protein components (i.e., LTA and/or hyaluronic acid (HA)) contribute to non-normal adhesion profiles. The adhesion of late exponential phase *S. pyogenes* (high HA content) was not decreased by PPO treatment. This method allows a detailed analysis of the role of various surface molecules in the complex adhesion of *S. pyogenes* to host epithelium.

L7 ANSWER 2 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2000:349885 BIOSIS

DOCUMENT NUMBER: PREV200000349885

TITLE: The effect of **polyphenol oxidase** and asparaginase on Type 1 and P fimbrial adhesins of uropathogenic *Escherichia coli*.

AUTHOR(S): Wehner, M. R. (1); Olchawa, M. (1); Doyle, R. J.; Cowan, M. M. (1)

CORPORATE SOURCE: (1) Miami University, Oxford, OH USA

SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (2000) Vol. 100, pp. 60-61. print.
Meeting Info.: 100th General Meeting of the American Society for Microbiology Los Angeles, California, USA May 21-25, 2000 American Society for Microbiology
. ISSN: 1060-2011.

DOCUMENT TYPE: Conference

LANGUAGE: English

SUMMARY LANGUAGE: English

L7 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:507501 CAPLUS

DOCUMENT NUMBER: 135:97467

TITLE: Methods and compositions for inhibiting adhesion by microorganisms using enzymes

INVENTOR(S): Doyle, Ron J.; Cowan, M. M.

PATENT ASSIGNEE(S): University of Louisville Research Foundation, Inc., USA; Board of Trustees of Miami University

SOURCE: PCT Int. Appl., 90 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049255	A2	20010712	WO 2000-US35532	20001229
WO 2001049255	A3	20020221		
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002009436	A1	20020124	US 2000-750857	20001229
EP 1242113	A2	20020925	EP 2000-986769	20001229
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 1999-173821P P 19991230

WO 2000-US35532 W 20001229

AB The present invention is directed generally to compns. and methods for enzymic redn. of adhesion by a microorganism to cells, tissues, extracellular matrix, teeth, and/or dental prostheses. The compns. of the invention include pharmaceutical compns. including implants and oral care compns., such as mouthwashes and toothpastes, contg. an enzyme that can reduce binding of a microbe to a cell, a tissue, or a surface. Suitable enzymes include a **polyphenol oxidase** and an

asparaginase. These enzymes reduce the adhesion by a microorganism but do not kill them.

L7 ANSWER 4 OF 11 USPATFULL

ACCESSION NUMBER: 2003:152379 USPATFULL
TITLE: Novel therapeutic binding molecule complexes
INVENTOR(S): Virtanen, Jorma, Irvine, CA, UNITED STATES
Virtanen, Sinikka, Irvine, CA, UNITED STATES
PATENT ASSIGNEE(S): Burstein Technologies, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003104045	A1	20030605
APPLICATION INFO.:	US 2002-105211	A1	20020325 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 1999-407705, filed on 28 Sep 1999, GRANTED, Pat. No. US 6379699 Continuation of Ser. No. US 1996-627695, filed on 29 Mar 1996, GRANTED, Pat. No. US 5997861 Continuation of Ser. No. US 1995-424874, filed on 19 Apr 1995, GRANTED, Pat. No. US 5718915 Continuation of Ser. No. US 1994-332514, filed on 31 Oct 1994, ABANDONED		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	David J. Oldenkamp, Esq., Oppenheimer Wolff & Donnelly LLP, Suite 3800, 2029 Century Park East, Los Angeles, CA, 90067		
NUMBER OF CLAIMS:	17		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	27 Drawing Page(s)		
LINE COUNT:	2384		

AB A supramolecule has a first supramolecular component including a first effector molecule covalently joined to a first nucleic acid, and a second supramolecular component including a second effector molecule covalently joined to a second nucleic acid, wherein the second nucleic acid has a region of at least partial complementarity to the first nucleic acid, wherein the first nucleic acid is in a base pairing relationship with the second nucleic acid and the first or second effector molecules are proteins, polypeptides, lipids or sugars. The supramolecule may further have a third supramolecule component which includes a third effector molecule covalently joined to a third nucleic acid, wherein the third nucleic acid has a region of at least partial complementarity to the first nucleic acid or the second nucleic acid and wherein the third nucleic acid is in a base pairing relationship with the second nucleic acid or the first nucleic acid.

L7 ANSWER 5 OF 11 USPATFULL

ACCESSION NUMBER: 2002:235434 USPATFULL
TITLE: Biosensors, reagents and diagnostic applications of directed evolution
INVENTOR(S): Minshull, Jeremy, Menlo Park, CA, UNITED STATES
Davis, S. Christopher, San Francisco, CA, UNITED STATES
Welch, Mark, Fremont, CA, UNITED STATES
Raillard, Sun Ai, Mountain View, CA, UNITED STATES
Vogel, Kurt, Palo Alto, CA, UNITED STATES
Kreber, Claus, Mountain View, CA, UNITED STATES
PATENT ASSIGNEE(S): Maxygen, Inc., Redwood City, CA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002127623	A1	20020912
APPLICATION INFO.:	US 2001-920607	A1	20010731 (9)

NUMBER	DATE
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PRIORITY INFORMATION: US 2000-222056P 20000731 (60)
US 2000-244764P 20001031 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: LAW OFFICES OF JONATHAN ALAN QUINE, P O BOX 458,
ALAMEDA, CA, 94501

NUMBER OF CLAIMS: 130
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 6877

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for sensing test stimuli using arrays of biopolymers are provided. Libraries of biopolymers, such nucleic acid variants, and expression products encoded by nucleic acid variants are provided. Reusable library arrays, and methods for their use are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 6 OF 11 USPATFULL

ACCESSION NUMBER: 2002:93381 USPATFULL
TITLE: Liposome having attached target-binding moiety and
artherosclerotic plaque interacting moiety
INVENTOR(S): Virtanen, Jorma, Irvine, CA, United States
Virtanen, Sinikka, Irvine, CA, United States
PATENT ASSIGNEE(S): Burstein Technologies, Inc., Irvine, CA, United States
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6379699	B1	20020430
APPLICATION INFO.:	US 1999-407705		19990928 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1996-627695, filed on 29 Mar 1996, now patented, Pat. No. US 5997861 Continuation-in-part of Ser. No. US 1995-424874, filed on 19 Apr 1995, now patented, Pat. No. US 5718915 Continuation-in-part of Ser. No. US 1994-332514, filed on 31 Oct 1994, now abandoned		

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Naff, David M.
LEGAL REPRESENTATIVE: Oppenheimer Wolff & Donnelly LLP
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 28 Drawing Figure(s); 21 Drawing Page(s)
LINE COUNT: 2299

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes are prepared containing two or more different effector molecules joined to each other by a joining component. One effector molecule is a binding molecule such as an antibody or Fc receptor that binds to a molecular target such as a virus or antibody at a site of infection or tumor, and another effector molecule is a therapeutic molecule such as an enzyme or drug. The joining component may be a liposome, protein or an organic polymer (including a dendrimer type polymer), and may be of sufficient length and/or flexibility to permit the therapeutic molecule to physically interact with the target at the same time as the binding molecule. Supramolecules are formed containing at least two supramolecular component molecules that contain an effector molecule and a nucleic acid chain. A nucleic acid chain on a component molecule is complementary to a nucleic acid chain on another component molecule to enable binding of the component molecules of the supramolecule by the formation of double stranded nucleic acid chains between complementary chains. A targetable antiviral supramolecule is prepared containing spectrin as the joining component. The binding molecule can be an antibody specific for an antigen on a viral particle and the therapeutic molecule can be an enzyme capable of destroying

infectivity of the virus by hydrolysis of viral coat protein or viral lipid. A targeting moiety that binds to low density lipoprotein or atherosclerotic plaque and a therapeutic moiety that interacts with atherosclerotic plaque are attached to a liposome for treating atherosclerosis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 7 OF 11 USPATFULL

ACCESSION NUMBER: 2002:66608 USPATFULL
TITLE: Compositions for controlling bacterial colonization
INVENTOR(S): Budny, John A., Westlake Village, CA, UNITED STATES
Budny, Matthew J., Westlake Village, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002037259	A1	20020328
APPLICATION INFO.:	US 2000-735281	A1	20001211 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-249674, filed on 12 Feb 1999, GRANTED, Pat. No. US 6159447		
	Continuation-in-part of Ser. No. US 1997-951393 , filed on 16 Oct 1997, GRANTED, Pat. No. US 5871714		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	COLIN P ABRAHAMS, 5850 CANOGA AVENUE, SUITE 400, WOODLAND HILLS, CA, 91367		
NUMBER OF CLAIMS:	47		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Page(s)		
LINE COUNT:	1282		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition for controlling bacterial growth/colonization is provided. The composition comprises a selected enzyme, a selected anchor molecule coupled to the enzyme to form an enzyme-anchor complex, with the anchor being capable of attaching to a substrate proximal to a bacterial colony. The attachment to the substrate permits prolonged retention time of the enzyme-anchor complex where the bacterial colony is present to increase the effectiveness of the complex. The invention is also for a method of controlling colonization of bacterial plaque in the oral cavity, as well as a method of forming a composition for controlling the proliferation of bacterial colonies in the oral cavity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 8 OF 11 USPATFULL

ACCESSION NUMBER: 2002:16560 USPATFULL
TITLE: Methods and compositions for inhibiting adhesion by microorganisms
INVENTOR(S): Doyle, Ron J., Louisville, KY, UNITED STATES
Cowan, M. M., Cincinnati, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002009436	A1	20020124
APPLICATION INFO.:	US 2000-750857	A1	20001229 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-173821P	19991230 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903	
NUMBER OF CLAIMS:	50	
EXEMPLARY CLAIM:	1	

NUMBER OF DRAWINGS: 13 Drawing Page(s)

LINE COUNT: 2655

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed generally to compositions and methods for enzymatic reduction of adhesion by a microorganism to cells, tissues, extracellular matrix, teeth, and/or dental prostheses. The compositions of the invention include pharmaceutical compositions and oral care compositions containing an enzyme that can reduce binding of a microbe to a cell, a tissue, or a surface. Suitable enzymes include a **polyphenol oxidase** and an asparaginase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 9 OF 11 USPATFULL

ACCESSION NUMBER: 2000:167495 USPATFULL

TITLE: Compositions for controlling bacterial colonization

INVENTOR(S): Budny, John A., Westlake Village, CA, United States

Budny, Matthew J., Westlake Village, CA, United States

PATENT ASSIGNEE(S): PharmaCal Biotechnologies, LLC, Westlake Village, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6159447	✓	20001212
APPLICATION INFO.:	US 1999-249674		19990212 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1997-951393, filed on 16 Oct 1997, now patented, Pat. No. US 5871714, issued on 16 Feb 1999		

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted

PRIMARY EXAMINER: Weddington, Kevin E.

LEGAL REPRESENTATIVE: Abrahams, Colin P.

NUMBER OF CLAIMS: 47

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 5 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT: 1272

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition for controlling bacterial growth/colonization is provided. The composition comprises a selected enzyme, a selected anchor molecule coupled to the enzyme to form an enzyme-anchor complex, with the anchor being capable of attaching to a substrate proximal to a bacterial colony. The attachment to the substrate permits prolonged retention time of the enzyme-anchor complex where the bacterial colony is present to increase the effectiveness of the complex. The invention is also for a method of controlling colonization of bacterial plaque in the oral cavity, as well as a method of forming a composition for controlling the proliferation of bacterial colonies in the oral cavity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 10 OF 11 USPATFULL

ACCESSION NUMBER: 1999:159478 USPATFULL

TITLE: Antiviral supramolecules containing target-binding molecules and therapeutic molecules bound to spectrin

INVENTOR(S): Virtanen, Jorma, Irvine, CA, United States

Virtanen, Sinikka, Irvine, CA, United States

PATENT ASSIGNEE(S): Burstein Laboratories, Inc., Irvine, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5997861		19991207
APPLICATION INFO.:	US 1996-627695		19960329 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1995-424874, filed on 19 Apr 1995, now patented, Pat. No. US 5718915 which		

is a continuation-in-part of Ser. No. US 1994-332514,
filed on 31 Oct 1994, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.
LEGAL REPRESENTATIVE: Halluin, Albert P. Howrey & Simon
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 28 Drawing Figure(s); 24 Drawing Page(s)
LINE COUNT: 2390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes are prepared containing two or more different effector molecules joined to each other by a joining component. One effector molecule is a binding molecule such as an antibody or Fc receptor that binds to a molecular target such as a virus or antibody at a site of infection or tumor, and another effector molecule is a therapeutic molecule such as an enzyme or drug. The joining component may be a liposome, protein or an organic polymer (including a dendrimer type polymer), and may be of sufficient length and/or flexibility to permit the therapeutic molecule to physically interact with the target at the same time as the binding molecule. Supramolecules are formed containing at least two supramolecular component molecules that contain an effector molecule and a nucleic acid chain. A nucleic acid chain on a component molecule is complementary to a nucleic acid chain on another component molecule to enable binding of the component molecules of the supramolecule by the formation of double stranded nucleic acid chains between complementary chains. A targetable antiviral supramolecule is prepared containing spectrin as the joining component. The binding molecule can be an antibody specific for an antigen on a viral particle and the therapeutic molecule can be an enzyme capable of destroying infectivity of the virus by hydrolysis of viral coat protein or viral lipid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 11 OF 11 USPATFULL

ACCESSION NUMBER: 1998:17090 USPATFULL
TITLE: Antiviral liposome having coupled target-binding moiety and hydrolytic enzyme
INVENTOR(S): Virtanen, Jorma, Irvine, CA, United States
Virtanen, Sinikka, Irvine, CA, United States
PATENT ASSIGNEE(S): Burstein Laboratories, Inc., San Juan Capistrano, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
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NUMBER OF DRAWINGS: 28 Drawing Figure(s); 24 Drawing Page(s)
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Complexes are prepared containing two or more different effector molecules joined to each other by a joining component. At least one of the effector molecules can bind to a target molecule and at least one of the other effector molecules has therapeutic properties. The joining component can be liposomes, proteins and organic polymers including dendrimer polymers, and can be of sufficient length and/or flexibility

to permit the therapeutic effector molecule to interact with a target at the same time as the binding molecules. An antiviral liposome is prepared by coupling to a liposome outer surface a hydrolytic enzyme capable of digesting a viral component and a target-binding moiety which may be a polypeptide, glycoprotein or glycoprotein fragment having specificity for viruses such as HIV-1, influenza virus and hepatitis virus. The hydrolytic enzyme may be a glycosidase, phospholipase, lipase, cholesterol esterase, nuclease or protease. A second hydrolytic enzyme and target-binding moiety may also be present, and albumin may be coupled to the liposome surface. Within the liposome may be an internal hydrolytic enzyme capable of digesting a viral component.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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WEST Search History

DATE: Wednesday, June 11, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR</i>			
L34	L28 and l1	9	L34
L33	L32 and contact?	32	L33
L32	L31	203	L32
L31	L30 and adhesin	203	L31
L30	L29 and bacteria	203	L30
L29	L28 and l2	212	L29
L28	inhibition and adhesin	1506	L28
L27	l7 and adhesin	9	L27
L26	L24 and adhesin	9	L26
L25	L24 and probiotic	0	L25
L24	L7 and method	130	L24
L23	L7 and contact?	3	L23
L22	L8 and contact?	2	L22
L21	L8 and probiotic	0	L21
L20	L8 and adhesin	0	L20
L19	L17 and cowan	68	L19
L18	L17 and Doyle	0	L18
L17	L16 and surface	104	L17
L16	L15 and human	104	L16
L15	L14 and device	104	L15
L14	L13 and catheter	104	L14
L13	L12 and tyrosine	104	L13
L12	L8 and lectin	104	L12
L11	L10 lectin	14363	L11
L10	L8 and bacteria	106	L10
L9	L8 and E.coli	1	L9
L8	L7 and prokaryote	106	L8
L7	L6 and l1	130	L7
L6	L5 and inhibition	2287	L6
L5	L4 and adhesion	5747	L5
L4	polyphenol(2w) oxidase	49245	L4
L3	polyphenol oxidase	44855	L3
L2	L1 and polyphenol oxidase	26366	L2

L1

L-asparaginase

1022

L1

END OF SEARCH HISTORY